

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Dardo Bonaparte Lujan

Serial Number: 10/791,054

Filing Date: March 2, 2004

Title: Armored Assembly

Examiner: Troy Chambers

Art Unit: 3641

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

RESPONSE TO OFFICE ACTION

Sir:

A three (3) month extension fee is believed to be required. Please charge the fee for this extension to CARSTENS & CAHOON, L.L.P. Deposit Account No. 50-0392.

In response to the correspondence mailed June 1, 2007, the Applicant offers the following amendments and remarks:

Amendments to the Claims are reflected in the listing of claims, which begins on page 2 of this paper.

Remarks/Arguments begin on page 9 of this paper.

Amendment to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Previously Presented): A ballistic panel for providing ballistic protection, the panel comprising a plurality of deformable pieces that are arranged side-by-side and detachably retained into the panel in a manner that a piece impinged by a projectile becomes attached to the projectile and removed from the panel, whereby the size and shape of the projectile is increased by the attachment of the piece in order to be more easily stopped by any further panel provided for stopping the projectile, wherein said pieces form part of at least one high-tensile strength fabric cut into said pieces, and wherein the at least one high-tensile strength fabric is made of polymeric threads, said polymeric threads being one or a combination selected from the group consisting of: aramid threads, polyester threads, synthetic threads, aramid fibers, ultra high resistance polyethylene fibers, and thread fibers.
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2. (Original): The panel of claim 1, wherein the pieces are arranged in at least one plane.
3. (Withdrawn): The panel of claim 1, wherein the plurality of pieces is a plurality of compact ballistic units that are arranged into a side-by-side pattern and compacted into a dense panel, wherein each ballistic unit comprises a plurality of fibers arranged into a bundle that is folded and entangled into a compact mass of fibers.
4. (Withdrawn): The panel of claim 3, wherein each compact ballistic unit comprises a bundle of fibers that is folded and entangled into a knot.

5. (Cancelled).
6. (Previously Presented): The panel of claim 1, wherein the at least one high-tensile strength fabric comprises a plurality of fabric sheets arranged into a pattern in that the pieces of a fabric sheet are offset relative the pieces of any adjacent fabric sheet.
7. (Cancelled).
8. (Withdrawn): The panel of claim 1, wherein the plurality of pieces is a plurality of side-by-side arranged ring members, each ring member defining an inner diameter smaller than an outer maximum dimension of the projectile.
9. (Withdrawn): The panel of claim 8, wherein each ring member is selected from the group comprising lock washers, tooth washers, spring washers, rings, spring coil, sand clock-shaped spring and mixtures thereof.
10. (Withdrawn): The panel of claim 8, wherein the ring members are connected to each other and arranged into at least one plane.
11. (Withdrawn): The panel of claim 8, wherein the ring members are arranged side-by-side in more than one adjacent planes in a manner that the ring members of one plane are offset of the ring members of the adjacent plane.
12. (Previously Presented): The panel of claim 1, wherein the deformable pieces are arranged side-by-side into a material selected from the group consisting of: cardboard, rubber, polymers, plastics, EVA, and composites.

13. (Withdrawn): The panel of claim 8, wherein the projectile is provided with a piercing tip having a minor dimension and the inner diameter of the ring member is larger than the minor dimension of the projectile member, for blocking the piercing tip.

14. (Withdrawn): The panel of claim 3, wherein the fibers of the ballistic units are made of polymeric threads selected from the group comprising aramid threads, polyester threads, synthetic threads, aramid fibers, ultra high resistance polyethylene fibers, thread fibers, and mixtures thereof.

15. (Previously Presented): A ballistic armored assembly for providing ballistic protection, the assembly comprising:

i. at least one ballistic panel comprising a plurality of side-by-side deformable pieces that are detachably retained into the panel in a manner that a piece impinged by a projectile is removed from the panel and attached to the projectile, whereby the size and shape of the projectile is increased by the attachment of the piece;[[and]]

5 ii. at least one projectile-stopping panel for stopping the projectile having said increased size and shape; and

10 iii. a front side and a rear side, with the at least one ballistic panel is located at least at the front side for receiving the impinging projectile and the at least one projectile-stopping panel is located at least at the rear side for stopping the projectile having the increased size and shape after passing through the ballistic panel, wherein the projectile-stopping panel is a projectile-trapping panel and the pieces form part of at least one high-tensile strength fabric cut into said pieces, with the 15 fabric being made of polymeric threads being one or a combination selected from the group consisting of: aramid threads, polyester threads, synthetic threads, aramid fibers, ultra high resistance polyethylene fibers, and thread fibers,

16. (Canceled).

17. (Canceled).

18. (Canceled).

19. (Canceled).
20. (Previously Presented): The assembly of claim 15, wherein the at least one high-tensile strength fabric comprises a plurality of fabric sheets arranged into a pattern that the pieces of a fabric sheet are offset relative the pieces of any adjacent fabric sheet.
21. (Canceled).
22. (Canceled).
23. (Canceled).
24. (Canceled).
25. (Previously Presented): The assembly of claim 15, wherein the deformable pieces are arranged side-by-side into a material selected from the group consisting of: cardboard, rubber, polymers, plastics, EVA, and composites.
26. (Cancelled).
27. (Previously Presented): The assembly of claim 15, wherein the panels form a pack with the panels attached to each other.
28. (Original): The assembly of claim 27, wherein at least one impact cushioning panel is provided at the rear side.

29. (Previously Presented): The assembly of claim 15, wherein the projectile-stopping panel is a projectile-trapping panel comprised of a compacted mass of loosely-entangled fibers, whereby the projectile having said increased size and shape is more easily stopped by the projectile-trapping panel.
30. (Previously Presented): The assembly of claim 29, wherein the fibers of the at least one projectile-trapping panel are formed from polymeric threads, one or a combination selected from the group consisting of: aramid threads, polyester threads, synthetic threads, aramid fibers, ultra high resistance polyethylene fibers, and thread fibers.
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31. (Withdrawn): The assembly of claim 29, wherein the fibers of the projectile-trapping panel are wrapped around a core support to form said at least one projectile-trapping panel.
32. (Withdrawn): The assembly of claim 29, wherein the fibers of the projectile-trapping panel are confined into an outer cover.
33. (Withdrawn): The assembly of claim 29, wherein the at least one projectile-trapping panel is a panel compacted into a press.
34. (Withdrawn): The assembly of claim 29, wherein the at least one projectile-trapping panel is a panel compacted by extracting any air in the mass of entangled fibers by means of a vacuum chamber.
35. (Not Entered): The ballistic panel of claim 1, wherein the pieces are pieces of Kevlar®.

36. (Not Entered): The ballistic panel of claim 5, wherein the high-tensile strength fabric is Kevlar®.

REMARKS

Claims 1, 2, 6, 12, 15, 20, 25, 27, 28, 29 and 30 are now pending in the present application. Claims 3, 4, 5, 7, 8, 9, 10, 11, 13, 14, 16, 17, 18, 19, 21, 22, 23, 24, 26, 31, 32, 33, and 34 have been withdrawn or cancelled pursuant to a restriction requirement.

Applicant has carefully studied the outstanding Office Action. The present Response is intended to be fully responsive to all points of rejection raised by the Examiner and is believed to place the application in condition for allowance. Favorable reconsideration and allowance of this application are respectfully requested. No new matter has been added by any of the amendments. Applicant respectfully requests reconsideration and withdrawal of the Examiner's rejections in view of the foregoing amendments and following remarks.

ELECTION/RESTRICTION

Examiner has withdrawn claims 12, 15, 20, 25 and 27-30 as allegedly being directed to a non-elected species. Examiner contends that the "inclusion of additional panels creates another species separate and distinct from the one previously election [sic]." However, the additional panels Examiner now complains of were already present in claims 12, 15, 20, 25 and 27-30 when Examiner issued previous office actions, including the office action dated May 12, 2006. There, Examiner objected to the drawings and stated that the additional panels must be shown in the drawings or cancelled from the claims. No mention was made by Examiner that such claims were drawn to non-elected species.

Now, Examiner has taken the wholly inconsistent position that these claims are directed to a non-elected species. Examiner does not base this decision on any new information, because

these newly withdrawn included “additional panels” back in May 2006. It is inconceivable how Examiner could justify such polar opposite positions, and it in fact appears to be an expedient means used by Examiner to refuse allowance of otherwise allowable claims. As Examiner is aware, Examiner has a “serious burden” of establishing reasons for insisting on the restriction. See MPEP § 808.02. To satisfy this serious burden, Examiner must show, for the restricted claims, (1) that each invention has attained recognition in the art as a separate subject for inventive effort, (2) a recognition of separate inventive effort by inventors, or (3) that examination of the claims would involve a separate field of search. *Id.* Examiner certainly has not given Applicant any guidance in the present Office Action regarding why Examiner has so suddenly changed his position or why the proposed restriction is necessary. In fact, it is apparent given Examiner’s previous examination of the claims in question (See Office Action dated May 12, 2006) that restriction of these claims is not necessary as examination of the same would not impose any burden on Examiner. It is further apparent that examination of claims comprising additional ballistic panels would not impose any additional burden on Examiner because at least one piece of art cited by Examiner in the present office action in fact discloses more than one panel (although Applicant is in no way admitting that any of the references cited by Examiner render the restricted claims unpatentable). Applicant, therefore, respectfully requests that Examiner adopt his previous position that these claims are drawn to the elected species E, recognize that Applicant is entitled to a fair examination of claims 12, 15, 20, 25 and 27-30, and withdraw this restriction.

Restriction requirements are only authorized where the claimed inventions are both “independent” and distinct. 35 U.S.C. § 121. The rules similarly require that the claimed inventions be both independent and distinct for a restriction requirement to be imposed. 37

C.F.R. §§ 1.141(a), 1.142(a). Only when the two or more inventions are in fact independent should an applicant be required to restrict the claims to but one of such independent inventions. MPEP § 806.04. Inventions are independent where they are not connected in design, operation, or effect. *See, e.g.*, MPEP § 808.01. Clearly Examiner previously believed that the now restricted claims were not both “independent” and “distinct” because Examiner had previously examined said claims. Moreover, clearly the addition of ballistic panels does not render the restricted claims unconnected in design, operation or effect. The overall goal is to stop projectiles, and the restricted claims pursue the same design, operation and effect as the non-restricted claims. For this additional reason, Applicant respectfully requests that Examiner withdraw his restrictions and examine these claims.

REJECTIONS UNDER 35 USC § 102

Claims 1, 2 and 6 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by US 6,219,842 issued to Bachner. Regarding claims 1, 2, and 6, the Office Action states in part:

Bachner discloses a bullet proof vest, comprising: plurality of ballistic panels 22, each ballistic panel-comprising a plurality of deformable pieces 24 made of aramid fibers as shown in Figs. 7A, 7B and 8. The pieces are arranged in at least one plane and each sheet is comprised of fibers weaved in a direction transverse to one another.

RESPONSE:

Applicant appreciates the opportunity to respond to Examiner’s rejection. Respectfully, Bachner does not disclose each and every element of claim 1, as required under applicable patent law. A prior art reference anticipates the claimed invention under 35 U.S.C. § 102 only if every element of a claimed invention is identically shown in that single reference, arranged as they are in the claims. *In re Bond*, 910 F.2d 831, 832, 15 U.S.P.Q.2d 1566, 1567 (Fed. Cir. 1990). All limitations of the claimed invention must be

considered when determining patentability. *In re Lowry*, 32 F.3d 1579, 1582, 32 U.S.P.Q.2d 1031, 1034 (Fed. Cir. 1994). Anticipation focuses on whether a claim reads on the product or process a prior art reference discloses, not on what the reference broadly teaches. *Kalman v. Kimberly-Clark Corp.*, 713 F.2d 760, 218 U.S.P.Q. 781 (Fed. Cir. 1983).

Examiner has not even attempted to show that each and every element of claim 1 is shown or described in Bachner. First, Bachner does not disclose or show a panel with pieces that are detachably retained into the panel in a manner that a piece impinged by a projectile becomes attached to the projectile and removed from the panel which is an element of claim 1. As Examiner noted, the panel in Bachner is a “sheet comprised of fibers weaved in a direction transverse to one another.” Surely Examiner can recognize that sections of Bachner’s woven panel are not “detachably retained,” and thus do not anticipate the pieces of Applicant’s panel in claim 1.

Second, Bachner does not disclose detachably retained pieces that are cut into said pieces which is also required under claim 1. Here again, Bachner does not even disclose discrete pieces, much less discrete pieces that have been cut into said pieces. Clearly Bachner does not anticipate claim 1 because it does not show or describe detachably retained pieces that have been cut into said pieces. Applicant therefore respectfully requests that Examiner withdraw this rejection of claim 1. Applicant further requests that the rejection of claims 2 and 6 be withdrawn as well, as they are dependent on the improperly rejected claim 1.

REJECTIONS UNDER 35 USC § 103

Claims 1, 2 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over US 2723214 issued to Meyer.

Regarding claims 1, 2, and 6, the Office Action states in part:

Meyer discloses a ballistic panel comprising a plurality of deformable pieces 7 arranged side-by-side and detachably retained as seen in Figs. 1 and 3. The pieces are formed of glass fibers that reads on applicant's "thread fibers" since threads are fibers and fibers are threads. (fiber: 1: a thread or a structure or object resembling a thread, <http://mw1.merriam-webster.com/dictionary/fiber>). The deformable pieces are arranged in at least one plane a plurality of layers that are offset from one another as shown in Figs. 5 and 6. Meyer does not disclose that the pieces form part of a high-tensile strength fabric. It would have been obvious to one having ordinary skill in the art at the time the invention was made to substitute the glass fibers with anyone of aramid threads/fibers, polyester and synthetic threads and ultra high resistance polyethylene fibers, since each are known equivalents in the armor art (see, e.g., US 200300200861, US 7197972 and US 5196252) and the selection of any of these known equivalents to stop projectiles would be within the level of ordinary skill in the art.

RESPONSE:

Respectfully, Meyer does not disclose pieces that are detachably retained on the ballistic panel in a manner that a piece impinged by a projectile becomes attached to the projectile and removed from the panel. All limitations of the claimed invention must be considered when determining patentability. *In re Lowry*, 32 F.3d 1579, 1582, 32 U.S.P.Q.2d 1031, 1034 (Fed. Cir. 1994). A reference may be said to "teach away" from the claimed invention when a person of ordinary skill, upon reading the reference, would be discouraged from following the path set out in the reference, or would be led in a direction divergent from the path that was taken by the applicant. *In re Gurley*, 27 F.3d 551, 553, 31 U.S.P.Q.2D 1130, 1131 (Fed. Cir. 1995). Evidence of unanticipated, unexpected or surprising results supports the conclusion that a combination is not obvious to those skilled in the art. *See KSR Int'l Co. v. Teleflex Inc.*, 127 S. Ct. 1727, 1740 (2007).

As can be seen in Figure 3 of Meyer, the pieces do not detach from the ballistic panel and become attached to the projectile. Instead, the entire ballistic panel of Meyer deforms slightly when it is impinged by a projectile, but the individual pieces do not completely detach from the panel, which stands in stark contrast to the invention described in Applicant's Figure 16 and claimed in claim 1.

Furthermore, it would not have been obvious to one skilled in the art to substitute the glass fibers of Meyer for any one of aramid threads/fibers, polyester and synthetic threads and ultra high resistance polyethylene fibers, as Examiner contends, because Meyer teaches away from the use of such loose fibers. As has been pointed out to Examiner in response to previous office actions, Meyer does not disclose only glass fibers. Meyer, in fact, discloses resin impregnated glass fibers, which yield "rigid plates" that are not intended to deform when impinged by a projectile. By contrast, Applicant's loose fibers, which Examiner contends would be obvious to substitute into the teachings of Meyer, would, in fact, not yield rigid plates, and thus would not perform the same function as the resin impregnated glass fibers disclosed in Meyer.

Nowhere does Meyer suggest that anything except rigid plates would be successful in stopping a projectile. Therefore, because the loose fibers of claim 1 are not resin impregnated or rigid, the fact that the fibers of claim 1 are successful in stopping a projectile impinging the ballistic panel is strong evidence of surprising and unanticipated results. It would, therefore, not be obvious to one skilled in the art to substitute any non-rigid fibers, such as those referenced in claim 1, for the rigid plates disclosed in Meyer. For each of the foregoing reasons, Applicant respectfully requests that Examiner withdraw his rejection of claim 1 under 35 USC § 103. Applicant also respectfully requests withdrawal of the rejections of claims 2 and 6 as they are

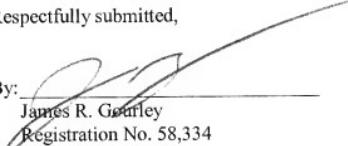
dependent on the allowable claim 1.

CONCLUSION

Applicant believes the claims are in condition for allowance. It is respectfully urged that the subject application is patentable over references cited by Examiner and is now in condition for allowance. Applicant requests reconsideration of the application and allowance of the claims in view of the foregoing remarks. If there are any outstanding issues that the Examiner feels may be resolved by way of a telephone conference, the Examiner is cordially invited to contact David Carstens at 972.367.2001.

The Commissioner is hereby authorized to charge any additional payments that may be due for additional claims to Deposit Account 50-0392.

Respectfully submitted,

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